MichaelA R Biggs "Learning from Experience: approaches to the experiential componenet of practice-based research" in: *Forskning, Reflektion, Utveckling.* Stockholm, Vetenskapsrådet, 2004, 6-21.
Online version. Original pagination in square brackets.

"Learning from Experience: approaches to the experiential component of practice-based research"

Michael A R Biggs
University of Hertfordshire
College Lane
Hatfield
AL10 9AB
UK
<m.a.biggs@herts.ac.uk>

Abstract

This paper is about models of research and knowledge. In particular it addresses the implications of so-called practice-based research in art and design as a method or as a mode of communication for experiential content. The investigation is pursued by contrasting the way in which we use linguistic modes of argument and communication with the possibilities offered by non-linguistic modes. Three principal types of experiential knowledge are identified: explicit, tacit and ineffable. Explicit content is expressed linguistically. Tacit content has an experiential component that cannot be efficiently expressed linguistically. Ineffable content cannot be expressed linguistically. It would therefore be necessary to prove that practice-based research only generates ineffable content in order to substantiate the argument that practice-based research *necessarily* demands non-linguistic modes of argument and communication. This idea is rejected.

An ontology of practice-based research is introduced which argues that experientially led research questions are context-dependent, and this affects both the framing of such questions, and the methods for their investigation. It is concluded that the appropriateness of methods is to be judged in terms of satisfying the audience for whom the questions have value. This has consequences for the provision of methodology training in doctoral programmes.

The nature of so-called practice-based research

I am going to start this paper with two explicit assumptions. This has a number of advantages, for example, if you do not share these assumptions you can stop reading now, or prepare to argue with me. If these assumptions are constitutive of the problem, in other words if it is necessary to share these assumptions in order to recognise the problem, then once again those who do not share these assumptions are perhaps relieved of any obligation to continue further. It is also a convenient point of argumentation for critics to have such assumptions made explicit.
[7]

The first explicit assumption that I am going to make is that practice-based research prioritizes some property of experience arising through practice, over cognitive content arising from reflection on practice. I take this to be the meaning of the term "practice-based research". Alternative explanations of the meaning of practice-based research can degenerate into statements of the obvious. For example, that research is in some way evoked by, or has consequences in, practice. This is the claim for all action research and there are very few areas in which pure research is so disassociated from the realm of practice and experience that it could not find any application. After all, highly theoretical studies in physics have practical consequences in the development of computing, nano-technology, etc.

Unfortunately even this fairly basic assumption is inadequate as a starting point. Since there is also considerable disagreement in our field regarding the meaning of "research", perhaps my first assumption merely clarifies in what way research is modified by the adjective "practice-based". Finding a commonly accepted definition for research is not as easy as it may sound, and so I propose an indirect approach. In the UK, the main funding body for our discipline, the Arts and Humanities Research Board (http://www.ahrb.ac.uk), asks applicants to state their plans for the dissemination of outcomes. In order to be as inclusive as possible and to presume only the minimum that is necessary for my argument, my second explicit assumption is simply that research that can be communicated or disseminated is more desirable than research that cannot be communicated or disseminated, because it will have greater impact in its field. Impact is something assessed by the UK's Research Assessment Exercise (http://www.rae.ac.uk). To give examples of what I have in mind, it seems to me that research undertaken by a practitioner into his or her own practice may have a limited interest and applicability to other practitioners, whereas research that draws out from such an investigation a transferable outcome will increase the likelihood that it will be consequential and therefore meaningfully communicated or disseminated to others. I believe that this latter outcome is more desirable than the former, and making this second assumption leaves open the opportunity to disagree in other respects with the AHRB definition of research.

So in looking at the nature of practice-based research we have the initial conditions that it has an experiential component and should be communicable to others. Framing the issue in this way highlights the core of the problem which is the communication of experiential content. That will form the focus of this paper.

There is one other important aspect that we should not overlook and that is the claim that practice is an integral part not only of the communication of outcomes but also of the process of research. I am not thinking of, indeed I am not especially interested in, research that adopts the empirical scientific model of conducting experiments, e.g. with new materials. I am interested in investigations in which aesthetic judgements
[8]

are made in relation to sensory objects and one might argue that this process as well as having an empirical basis, that is could be examined through experimentation, actually arises through the experience of being confronted with these judgements and that therefore the identification of the initial problem, as well as its conduct through experimentation, arises in the realm of experience rather than in the realm of cognition.
If we think of Descartes sitting alone in his room contemplating what must be, it is not clear how much of the world of art would have arisen (Descartes 1972: discourses 2 & 3). Artistic enquiry is not just artistic enquiry about the nature of the physical world but is also artistic enquiry about the artistic world. Nearly all research in Material Culture could be described in this way, and that is what makes it different from enquiries concerning the same objects in physics or engineering. Therefore the observation that questions about experience arise through the process or as a consequence of experience, is valid.

In setting out the scope of this enquiry I have suggested that experience may be necessary at the stages of problem identification and specification; evoked somehow thorough process, though not the process of experimentation; and in the processes of communication and dissemination. My next step is to consider what is meant by experience, and the first differentiation is between experiential feeling and experiential content.

The nature of experiential knowledge

The nature of experiential knowledge is shrouded in a cultural fog stemming from our continuing justifiable admiration for the ancient Greeks. Ancient Greek philosophy valued the life of the mind over the life of the body (e.g. Plato 1961: 48 ¶65). Ever since that time, experiences have been marginalised and thought to be imperfect or second-rate in comparison with intellectual pursuits. We see it in Cartesian dualism, in Locke's notion of primary innate ideas, etc. The complexity of giving a robust rational basis for everyday practical actions can be illustrated by noting that Whitehead and Russell took 362 tightly packed pages of logical notation to demonstrate that 1+1=2 (Whitehead and Russell 1927: §54.43), and even that proof did not survive for long without criticism (Steiner 1975: 26).

There are two closely related matters that I wish to separate from the outset. The first is the distinction between experiential feeling and experiential content. The second is the problem of the reflection upon or communication of experiential content in linguistic or non-linguistic modes.

The difference between feeling and content is, I hope, relatively straight forward. If we are interested in the role that experience can have in research then I hope we are agreed that we are less interested in experiential feeling, in focussing our attention on what the feeling is like that comprises or
[9]

accompanies a particular experience, and more interested in the meaning of that experience, of the experiential content and how that might be related to the content of our shared context. The question of whether one can reflect upon experience and the extent to which either reflection, that is cognition, or expression, that is in linguistic or non-linguistic modes, corrupts the experiential content is of course a key question. Maintaining phenomenological "authenticity" (cf. Heidegger 1999: 186) is extremely difficult and it is not my intention in this paper to state a position on the possibility of authenticity. For the moment I wish to concentrate on what might constitute experiential content and whether there appears to be something here that could or should be relevant to practice-based art and design research.

We can translate the problem of experiential content into one of representation. Using the concepts above, we seem to consider feelings as representations of content. Experiential feelings do not have the same form as experiential content, i.e. experiences present themselves as experiential feelings whereas we reflect cognitively upon the content of those experiences, hence my claim that experiential feelings *represent* experiential content. With some experiential feelings the experiential content represented may be trivial, e.g. pain. However, other experiential feelings represent significant aspects of human experience, e.g. the aesthetic response. Thus there are both sensory and cognitive elements to experience, although I do not mean to imply that the cognitive element is necessarily synonymous with linguistic form.

Returning to experiential knowledge as a *representational* problem, we can identify a feature that is sufficiently important as to underlie the most intractable problem of research in this area. The problem is that the experiential feelings that represent experiential content are private to the experiencing individual. Experiences must be expressed in the first person; "I feel...". While they remain private experiences they cannot reasonably be regarded as research because they do not meet the criterion that research should be disseminated (assumption 2). But the problems of identifying and communicating first person experiences to second and third persons is notoriously difficult. For example, it has come under sustained attack from Wittgenstein in his so-called private language argument (Wittgenstein 1953: §§243-315).

One of the ways in which we might illustrate this problem is to make a comparison between describing our experiences and describing objects in the world. It is a common model from communication and linguistics that some semantic references can be established through the process of ostension. If somebody asks "what is a chair?" we can point and say "that is a chair". This process is called ostensive definition. There are three key components: the demonstrative pronoun "that" accompanied by the gesture of pointing, and the term to be defined, e.g. "chair". But we can only point with our finger to physical objects. So when we are listening to music and
[10]

somebody asks "what is a major third?", how might we analyse the reply "that is a major third"? In the physical example, "that" and the pointing gesture form a pair that gives the reference to the otherwise indeterminate demonstrative pronoun "that". This is called gestural deixis (cf. Lyons 1977: §15). But we cannot point to the major third. We might make some bodily gesture such as raising a finger or making an attentive facial expression, but the demonstrative pronoun only "points" in the context of the utterance, a process called locutionary deixis. Indeed, we might not have any external phenomena at all. Suppose I reflect using my memory on a piece of music and say aloud "that was a beautiful piece". How does the demonstrative pronoun operate now? What can we say about the way that the demonstrative pronoun is connected to the idea? Somehow the word "that" points to a thought, a process called cognitive deixis.

The weakness of all deictic [pointing] activity is that there is a certain semantic ambiguity about what is being pointed at. If I point at the chair do I mean the shape of the chair, its colour, its materials, etc.? It is always possible to misunderstand what is being pointed at (Baker and Hacker 1988: 81). Locutionary deixis is vaguer than gestural deixis. Learning what constitutes a major third by only listening to orchestral performances is more difficult than listening to a chord played in isolation on the piano, because there are so many harmonic phenomena occurring at any one time. Conceptual deixis is even more opaque, although it is very common in everyday conversation. I suppose it relies on something like "the suspension of disbelief", a process of trust, the suspension of semantic analysis. But it is the aim of research to be unambiguous. Therefore identifying and pointing to experiential feeling is at the margins of possibility. It remains to be seen whether pointing instead to experiential content brings the matter closer to the subject of research or makes it an even more remote possibility.

The fact that experiential content is represented by experiential feeling is actually an advantage. A representation is some sort of translation where we step away from what we are trying to conceptualise and describe it in an alternative form, for example a landscape painting allows us to see connections that may be less apparent when confronted by the actual landscape itself. Because we have accepted the possibility of representation we can accept alternative representations. Thus we can paint the landscape, talk about the landscape, write poetry about the landscape, etc. In the case of experiential content, because feelings represent experiential content, some other mode such as linguistic or non-linguistic expressions or performances may effectively represent it. This is an important step because the immediate phenomena are shown to be a means to an end. We may be forced to communicate our research once again through phenomena but nonetheless the focus of the research, that is the end rather than the means, is experiential content. So the conclusion of this section is that experiential feelings are simply representations of that in which we are interested, namely experiential content. Because experiential feelings are
[11]

representations, we might substitute other representations for them. This frees us from the necessity of including or evoking experiential feelings in research. Now that the focus and content of practice has been established I will turn to the nature of that content as knowledge and discuss some different types of knowledge arising from practice.

Explicit knowledge, the tacit, and the ineffable

Gilbert Ryle has made a useful contribution to the discussion by making the distinction between practical and explicit knowledge. His distinction is between knowing-how and knowing-that. Knowing-how is a practical skill, for example knowing-how to ride a bicycle. One does not need to understand any of the theories of physics that explain that riding a bicycle is possible in order to have the practical skill or know-how of riding a bicycle. This does not mean that theories are not relevant since they might help to explain why one cannot easily balance on a bicycle when it is stationary. However, the practice of riding a bicycle is something that need not and perhaps cannot be put into words, and words of description or words of theory are equally unhelpful.

Ryle asserts a particular relationship between practice and theory (Ryle 1949: 30)

> Efficient practice precedes the theory of it; methodologies presuppose the application of the methods, of the critical investigation of which they are the products. I.e. efficient practice is not rule-following behaviour, in the sense described and criticised by Wittgenstein, and therefore the extraction of rules to follow is separate and not a necessary consequence of efficient practice.

But when he says "efficient practice precedes the theory of it", he is not claiming that chronologically first comes practice and then comes theory. Rather he is claiming that practice, in particular efficient practice, can happen in the absence of theory: that efficient practice is not dependent on theory. Not all efficient practice is necessarily followed by theory. Hence "the extraction of rules to follow is separate and not a necessary consequence of efficient practice".

Therefore Ryle's difference between knowing-how and knowing-that cannot be used as a defence of practice-based or practice-led research where one might wish to not only ground the research in efficient practice but also claim that the practice is a necessary prelude to theory. One reason why the transition from practice to theory cannot always be made is a limitation of language. Language cannot express everything. It is difficult if not impossible to explain to someone who cannot ride a bicycle what they must do in order to master this practice. As Polanyi puts it "we can know more than we can tell" (Polanyi 1983: 8). One might accompany
[12]

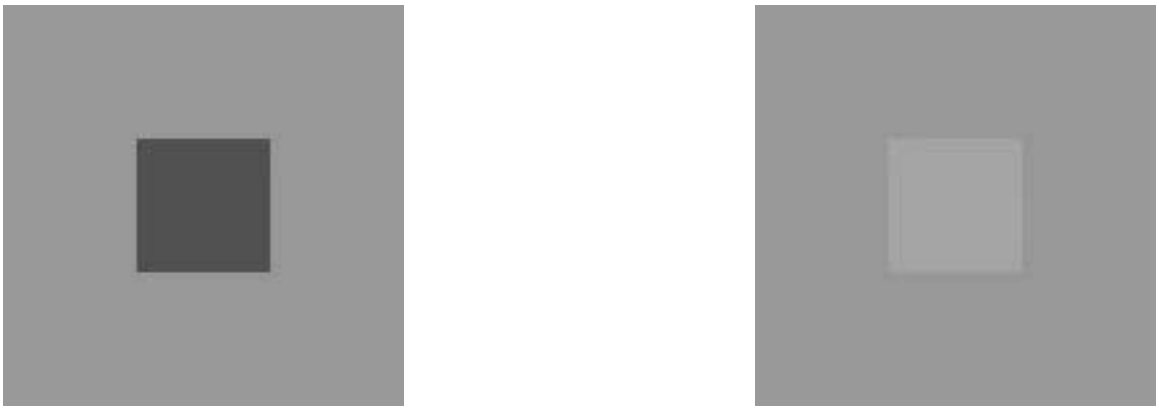
a practical demonstration with linguistic expressions such as "hold the handlebars lightly", etc. but successfully riding a bicycle is a matter of non-linguistically, or as Polanyi prefers "pre-linguistically", and unconsciously coordinating a number of bodily experiences. Even if one could express this in language it would be more efficient to simply show somebody. This precipitates three types of knowledge that seem to me to be implied in practice-based research: implicit, tacit and ineffable knowledge.

Explicit knowledge can be put into words, perhaps because the term "explicit" implies the term "linguistic". I do not think that we could say of any practical knowledge that it was also explicit, indeed there is a discussion to be had elsewhere whether there is any such thing as "practical knowledge" as opposed to practical reasoning (cf. Kant, Bourdieu, etc.). Tacit knowledge, of the sort discussed by Ryle and Polanyi, may or may not be made explicit. I may recognise the face of my friend in a crowd, but there are occasions when I may need to make this knowledge explicit, for example in a description to the police. In such cases it may be efficient to use a combination of showing and saying: to draw a picture of the face and say "the eyes are closer together". Ineffable knowledge cannot be put into words. Experiential feelings are ineffable; but in practice-based research we are concentrating on experiential content, and because experiential content is only represented by feelings it is not a necessary consequence that practice-based research is ineffable.

Thus far I have claimed a number of things that practice-based research in art and design "is not". I have claimed it is not the only research based in practice, that it is not synonymous with experimentation, or experiential feeling, or non-linguistic communication, it is not private, or ineffable, etc. I will now turn to some matters which seem to me implied by the nature of practice-based research that contribute to building an ontology of the problem: of "what it is".

Research questions and research responses

Ontologically, I would like to start at the beginning, with research as answering or responding to questions. What characterises the answer to a question? In the philosophy of language, the principal technique when confronted by a philosophical question is not to try to answer it, but to examine the question more closely to see "what it means". Employing this technique we might ask, what characterises research questions in the arts, and what kind of response would we be satisfied with? At this point practitioners have the opportunity to assert that practice-based questions and practice-based answers are characteristic. But let us not jump to too many conclusions. Let us admit that there are practice-led questions: questions that arise out of, and as a consequence of, practice. Colour theory may be one such area, questions that anyone ignorant of colour experience would not know about.
[13]



an example of simultaneous contrast from Johannes Itten, *Design and Form*, p.32

Let us first consider what sort of answer would satisfy us. If confronted by a sample in which the artist asserts we can experience the effect of simultaneous contrast, there may of course be those subjects who do not experience this effect, or who do not understand what is being sought and therefore cannot attend to the relevant experiential content. How is our attention to be drawn to the experiential content in question, and not to some other feature? This is the general problem of ostension that faces practice-led research. Having overcome this difficultly, is it enough that as a result of our research the audience say "oh yes, so it does!"?

Stating that "this colour physiologically demands its opposite colour" is not a question. "Why is the experiential content of these colour combinations one of simultaneous contrast?" is a question. "What are the boundary conditions?", is also a question. Questions may be made from any assertion. Some questions do not admit of single answers, e.g. what is the meaning of Hamlet? What is art?, etc. Such questions may be answered in a number of different ways and at different times, e.g. what did Shakespeare think was the meaning of Hamlet compared with what does Michael think is the meaning of Hamlet. If the question is unanswerable (or at least incapable of having a coherent response) then it is not a research question, since the purpose of a research question is to precipitate an answer. We could say unanswerable questions do not have a satisfying outcome for us (see above condition). Questions with multiple answers, i.e. pluralistic questions, may not satisfy one person but have the capacity to satisfy someone else. It is perhaps a measure of the success or impact of research how many other people are satisfied with the answer, i.e. an interpretation of the meaning of Hamlet that satisfies only me is less significant that an answer to the meaning of Hamlet that satisfies every Englishman. This issue of impact is the main criticism against the artist or designer researching his or her own work.

Why do we think research with impact is better than research without it? I think we have an implicit notion of research as useful. Good research
[14]

generates answers/solutions/responses that are useful to us. [Please note I have not claimed that it generates answers that are true!] They make connections with other ideas, and perhaps make other problems and questions disappear. A reduction in the net volume of unanswered questions might be regarded as a benefit to humanity. So practice-based research questions need to have the capability of generating responses that a community of users, the audience, finds useful. It needs to do this in such a way as to have some sort of impact on the ideas and actions of that audience. Having an impact depends on making a persuasive connection between the question and the answer, and that is the function of method. Method has received a lot of attention in UK doctoral education, and methodology training is a requirement of the government's quality control agency (http://www.qaa.ac.uk).

Methodology and audience satisfaction

Methodology is the study of methods. One of the defining characteristics of a doctorate or other research degree is that it gives explicit training in research methods, i.e. a methodology course. Research *per se* is also characterised by deploying explicit and appropriate research methods to research questions, e.g. AHRB definition of research at http://www.ahrb.ac.uk. However, the study of methodology has some peculiarities in the arts and in relation to experiential knowledge in particular.

Research training in the sciences is somewhat different from research training in the arts. In the sciences research is normally pursued within a paradigm (in Kuhn's sense of the term). A Kuhnian paradigm is a coherent set of concepts and methods that pervade the scientific approach to research questions at any one particular time, e.g. quantum mechanics. The choice of paradigm is a matter of efficiency for solving problems. Model Theory claims that it is both an indicator and a defining characteristic that methods can be validated in terms of relative coherence rather than in terms of their absolute validity.

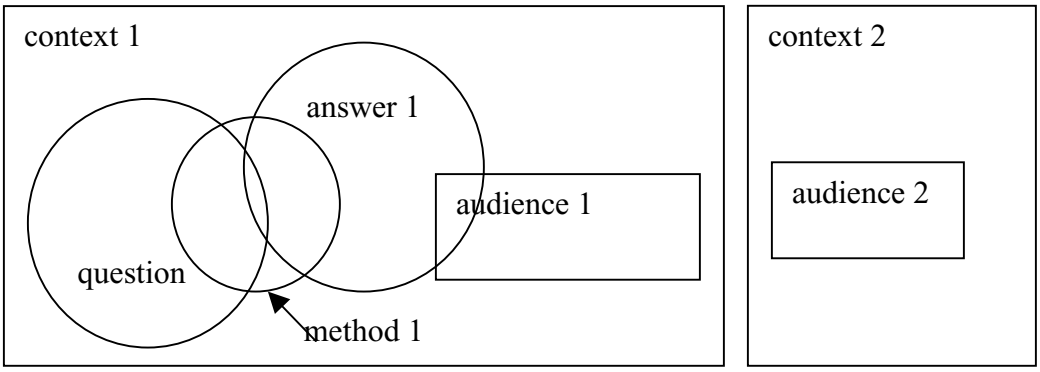
In the arts we do not pursue such a model. We are more likely to describe ourselves as operating within an episteme (in Foucault's sense of the term). This is an ontology (in the philosophical rather than computational sense of the term) from which we are conceptually unable to escape. It is therefore meaningless to apply a coherence test since within an episteme nothing will ever be incoherent. Another consequence is that there is no preference for one set of methods over another since finding multiple solutions is regarded as an asset rather than a weakness, e.g. the multiple interpretations of Hamlet. This presents difficulties for those who desire to provide methodology courses or to make decisions or validate ideas concerning the appropriateness of methods. However this does not mean that the arts are without a decision-making strategy regarding methodology.
[15]

The solution to the difficulty that I propose takes its approach from the philosophy of language used to discuss "research questions and answers" above. As we have seen, in the philosophy of language, before one attempts to answer a philosophical question one first analyses the language and therefore the exact meaning and implications of the question. It was Wittgenstein's [later] view that philosophical questions were characterised by a misuse of language which revealed them to be meaningless or unanswerable. Thus Wittgenstein firstly identified questions as being philosophical if they were based on a misuse of language, and secondly since philosophical questions were either meaningless or unanswerable it was a consequence of his method that he never provided any answers to philosophical questions. For some, including Bertrand Russell, Wittgenstein's method was therefore unsatisfactory:

> Wittgenstein... seems to have grown tired of serious thinking and to have invented a doctrine which would make such an activity unnecessary (Russell 1985: 161).

For others, e.g. subscribers to the philosophy of language, the method was satisfactory. From this example we can see that different answers to the same question will provide different levels of satisfaction to different audiences. Arts questions are capable of having more than one answer: this is perhaps one characteristic difference between questions in the arts and questions in the sciences. Thus one must not only identify the question, but one must also be clear who is the audience for the outcomes of the research and what kind of answer will satisfy them? On the basis of this clarity one can begin to identify a method that will result in an outcome that will satisfy the projected audience for the research. For example, if the audience includes Bertrand Russell then the method should not be Wittgensteinian, even though the answer may be satisfactory for others in the audience.

We thus have an implicit formula where the research question can have a satisfactory outcome for a particular audience using an appropriate method. The method will be regarded as appropriate if it has the capability to generate an outcome that is satisfactory to the target audience. But it should not be overlooked that these outcomes in the arts do not attempt to give absolute answers to factual questions [if there are such things]. Research in the arts is interpretational and pluralistic. This reinforces my earlier assertion that the outcomes of research will satisfy some audiences and not others. Audiences who will be satisfied with the outcomes of research share a context with the researcher, in which questions of this sort can be responded to appropriately in this way (Biggs 2002a: 21f.). We can represent this by a diagram:
[16]



It will be noted that part of the answer is contained in the question. Thus there are indicators in the question about what may be a satisfactory answer, assuming that the audience shares a concern with the question, or that the set of possible/meaningful questions about the subject belongs to a context shared by both the audience and the researcher. This implies that the researcher is a potential consumer of the research, which is normally the case.

What are the implications of this for the provision of methodology courses? I propose that the outcome is that it is not possible to equip a researcher with a basic toolkit of research methods. The reason that this is not possible, or at least difficult, time consuming, and therefore inefficient; is because of the plurality of answers for various audiences, and the observation that there are no preferred methods, only methods that are pragmatically prioritised in relation to context and audience. Therefore the task of methodology courses should be to provide the researcher with tools for the analysis of the relationship of context, question, answer and audience, so that a method may be tested for its appropriateness. It is the task of methodology: the study of methods, to provide a decision-making strategy for the researcher to answer the question: not "which method shall I use?" but "how shall we determine which method is appropriate?" If the focus of the purpose of methodology courses is thus changed, so too is the content changed: from discussing particular methods, to discussing the problem of appropriateness.

The problem of appropriateness is also one that should guide the composition of the thesis. The question about whether the form of the thesis should comprise only linguistic content, or whether artefacts may also be submitted, or even substituted, should be decided in relation to appropriateness. In the next section I therefore propose to discuss the thesis in terms of content rather than form.

The thesis

Etymologically, the word thesis has interesting roots. It comes from the ancient Greek *θέσις* meaning to put a proposition. Thus it is the *putting* of
[17]

an argument, a proposition, an affirmation, that is relevant and emphasises the rhetorical function of stress in the thesis rather than the proposition or argument that it may contain. Originally the word was used in the context of putting down one's foot or using one's hand to beat time in music, and thence to describing the stress or emphasis in poetry. Later, in logic and rhetoric, we find it refers to a proposition that is "put down", thus giving it a necessarily linguistic form. Finally, according to *The Oxford English Dictionary*, from 1653 we find it used quite distinctly in English in the context of a university degree, to describe maintaining or proving a thesis, i.e. argument [content] in a dissertation [form]. As with statistics it is possible to use dictionary definitions to prove almost anything. Therefore we should simply note that the word thesis has a special use in connection with university degrees, but that this definition does not explicitly state that university theses must consist exclusively of the written or spoken word. I think it is interesting that the origin of the word lies in the practical business of emphasis and only in the context of logic and rhetoric does it imply argument. Of course, a good university thesis will not simply assert something, but will argue it, and this is the context with which we are concerned.

One of the challenges of constructing a linguistic argument is to find common ground with the audience from which to begin one's process of reasoning and persuasion. The first part of any written thesis needs to establish a context in which the research questions arise and the grounds which one shares with the audience. It is common when criticising such an argument to go back to this context and these grounds, and to challenge them. From this starting point in the language-based thesis one takes the reader on a directed journey that leads via an explicit chain of reasoning to a conclusion. To criticise or refute the thesis requires the reader to demonstrate flaws in the chain or errors in the fundamental assumptions.

If we compare this situation with the possibilities that are available if artefacts alone are used for a non-linguistic equivalent of the university thesis, we can make the following observations. Establishing a context or common ground with the audience may require the use of artefacts separately from the main research. For example, one might present some part of an exhibition labelled as "context", or have material apart from the exhibition in a catalogue. But unusually this material would not need to be original but familiar: in order to establish common grounds. Secondly there is the difficult distinction in non-linguistic terms between assertion and argument. In research we do not simply wish to make an assertion in the sense of Classical Greek *θέσις*. We are concerned to "maintain or prove" what is in the thesis or dissertation. Thus we are concerned to provide an argument. Argument proceeds in a particular order from axioms to conclusion. Such a sequencing would also be necessary but not sufficient to characterise a non-linguistic presentation as argument rather than assertion. Finally one needs to deal with conditional aspects of argumentation. Argument commonly proceeds in an if-then mode of valid
[18]

inferences. This is conditional: *if* the initial conditions are not accepted *then* the conclusion is not accepted. Conditional propositions are characteristic of linguistic communication and it is difficult to conceive how these might be established non-linguistically. Overall therefore, what I wish to claim is that certain aspects of the dissertation may be established non-linguistically by converting aspects of the linguistic model of argumentation into non-linguistic mode. However, certain aspects remain non-convertible, e.g. conditionals and inference.

It is therefore my current position that while I can find arguments in favour of the combined linguistic and non-linguistic university thesis, I cannot yet defend the notion of an entirely non-linguistic submission. This is coupled with my argument elsewhere that it is part of the nature of research that it is linguistic (Biggs 2002a). We have construed the university thesis as an argument and there are certain properties that mean that they are at least more effectively constructed in linguistic mode, if not definitively constructed linguistically. Therefore if the art and design sector is to defend or accept the exclusively non-linguistic presentation it will need to define the nature of research and the thesis differently from all other disciplines. While this is a possibility it would seem to me to put the discipline at a disadvantage by making it no longer comparable to any other academic discipline, inviting the charge that it should not be in the universities. Since I operate in a university context I am much more interested to defend the way in which art and design has comparable content, and can be undertaken as rigorously, as any other discipline. I am therefore disinclined to redefine art and design research in ways that facilitate the entirely non-linguistic submission rather than considering what scope already exists within the more widely recognised criteria for acceptable research that allows for non-linguistic presentations of research to have a role. Furthermore, the nature of that role needs to be defended so that we are not merely proposing that examples of work can be submitted in addition to text, but that some content of the research both in terms of process and in terms of communication is effected non-linguistically because there is non-linguistic content, ineffable or tacit content, that will simply be omitted from research which is conducted, and more importantly communicated, exclusively in non-linguistic mode.

Conclusion

In conclusion I would like to summarise the main claims that I am making for the nature of practice-based research in art and design. Regarding the content of practice-based research, I have claimed that the term applies to both process and communication. It seems unlikely that artefacts will be essential to communicate content that is not itself ineffable. On the other hand, ineffable content does not necessarily require non-linguistic communication. Therefore art and design research is not obliged to
[19]

be communicated in non-linguistic modes. Experiences are not necessarily ineffable. Experiential feeling is ineffable but experiential feeling should not be the principal focus of practice-based research. Rather it should be seen as having a representational relationship to experiential content, and that should be our target. The claim that experiential content is merely represented by experiential feeling allows us to represent it in other ways, e.g. linguistically, and this explains why we can have an exclusively linguistic thesis about experience. Examples of this would include all philosophical papers written about experience. The question of communication via artefacts therefore becomes one of efficiency rather than necessity.

Ryle's distinction between knowing-how and knowing-that does not raise a category of practice-based activity with philosophical legitimacy, i.e. studying through knowing-how, because Ryle's argument does not provide a necessary connection between knowing-how and knowing-that, and I have claimed that the only part of Ryle that we could use as a defence would be if we could establish an ineffable aspect of knowing-that.

Moving on to method I have claimed that the formulation of explicit questions implies a linguistic mode but does not exclude tacit or ineffable content. It seems clear, and one can find examples such as the Bauhaus, that there are experiential questions that arise out of practical experience, can be investigated through practice, and can be demonstrated by practice. Whether a practical demonstration meets the criteria in terms of a research outcome remains to be discussed. Once an explicit question has been identified I have been critical of the approach in many doctoral programmes that methodology training can include training in a series of off-the-shelf methods. Instead I have argued that training in a decision-making strategy is needed, because there is a dynamic relationship between context, question, method and answer and audience. Varying any of these affects the appropriateness of the method, and I claim that method is the last variable to be determined. This is why repeatedly applying the same method to a variety of problems would be an invalid approach to research in art and design. What I advocate is a methodology training that enables decision-making about the appropriateness of methods.

Finally, in terms of communication, there is nothing about the etymology of the word thesis that precludes practice-based research. Indeed, the phatic aspect rather encourages it. However, the distinct use of the term in relation to university dissertations implies the linguistic mode because it is the nature of academic argument that issues such as context and conditionality apply. I have argued against redefining research in our sector to exclude these issues. The outcome of this paper is therefore to provide a defence of the role of artefacts as an integral part of doctoral and other research, and the doctoral submission, but is an argument against the doctoral submission that consists exclusively or necessarily of non-linguistic content, i.e. artefacts.
[20]

References

Baker, G. and P. Hacker (1988) "Ostensive Definition and its Ramifications" in: *Wittgenstein: meaning and understanding*. Oxford: Basil Blackwell.

Biggs, M. (2002a) "The Rhetoric of Research" in: Durling D. & J. Shackleton (Eds.) *Common Ground.* Proceedings of the Design Research Society International Conference at Brunel University, 111-118. Stoke-on Trent, UK: Staffordshire University Press.

Biggs, M. (2002b) "The role of the artefact in art and design research" *International Journal of Design Sciences and Technology* 10(2), 19-24.

Bourdieu, P. (1998) *Practical Reason: on the theory of action* Cambridge: Polity Press.

Descartes (1972) *Discourse on Method and the Meditations.* Harmondsworth: Penguin Books.

Foucault, M. *The Order of Things [Les Mots et la choses]*. London: Tavistock Press, 1970

Heidegger, M. (1999) *Being and Time.* Oxford: Basil Blackwell.

Itten, J. (1978) *Design and Form: the basic course at the Bauhaus.* Revised edition. London: Thames and Hudson.

Kant, I. (1993) *Critique of Practical Reason.* London: Macmillan.

Kuhn, T. (1970) *The Structure of Scientific Revolutions.* Second edition, enlarged. London: University of Chicago Press.

Lyons, J. (1977) *Semantics.* Vol.2. Cambridge University Press.

Pendlebury, M. in: Dancy, J. and E. Sosa (eds.) (1993) *A Companion to Epistemology* Oxford: Basil Blackwell.

Plato (1961) "Phaedo" in: *Plato: the collected dialogues.* Edited by E. Huntingdon and H. Cairns. Bollingen Series LXXI. New Jersey: Princeton University Press.

Polanyi, M. (1983) *The Tacit Dimension.* Gloucester, Mass.: Peter Smith.

Russell, B. (1948) *Human Knowledge: its scope and limits.* London: George Allen and Unwin.

Russell, B. (1985) *My Philosophical Development.* London: Unwin Hyman.

Ryle, G. (1949) *The Concept of Mind.* London: Hutchinson's University Library.

Steiner, M. (1975) *Mathematical Knowledge*. Ithaca: Cornell University Press.

Whitehead, A. and B. Russell. (1927) *Principia Mathematica* Second Edition, Volume 1. Cambridge: The University Press.
[21]

Wittgenstein, L. (1953) *Philosophical Investigations.* Oxford, Basil Blackwell.